



QUARTERLY GROUNDWATER MONITORING REPORT

First Quarter 2005 (Eleventh Quarterly)

Sampled on January 21, 2005

Job # SP-500

LOP # 12660

May 27, 2005

Big Oil and Tire Company Office (BO & T Old Office)

211 Railroad Avenue

Blue Lake, California 95525

This *Quarterly Groundwater Monitoring Report* was prepared by SounPacific Environmental Services (SounPacific) staff for Big Oil & Tire Co. (BO&T), using previous studies that were conducted by Clearwater Group, Inc. (CGI) and file review conducted at Humboldt County Department of Health and Human Services: Division of Environmental Health (HCDEH). The site is located at 211 Railroad Avenue, Blue Lake, California (Figure 1).

SITE DESCRIPTION

The site is surfaced around the current structure with concrete and vegetation. Site improvements include a single story building. The main structure is positioned in the southern portion of the property with the entrance to the building facing south towards Railroad Avenue. A storage building is located adjacent to the eastern property line immediately north of the primary building (Figure 2). The site is serviced by public utilities. Surface water is controlled by storm drains.

SITE TOPOGRAPHY AND LAND USE

SounPacific understands that the property is owned by Dave and Christina Fisch of Blue Lake, California. The surrounding land use in the immediate vicinity is residential with an interspersed of commercial properties. Residential properties lie to the north, east, south, and west of the site. The site is located approximately 90 feet above mean sea level (MSL). The Mad River is located approximately one half mile to the south and Powers Creek is located approximately one-quarter mile to the east of the site. The City of Blue Lake is situated in the Mad River flood plain. Site topography slopes gently toward the southwest (Figure 1).

RESULTS OF QUARTERLY SAMPLING

A quarterly groundwater monitoring program was implemented by SounPacific on July 15, 2002, and will continue until further notice. The program consists of recording monthly water level data for one year and collecting quarterly groundwater samples for laboratory analysis. Water level data is used to develop a figure which displays the groundwater gradient and average flow direction using standard three-point calculations. Analytical results from groundwater samples collected from the monitoring wells during quarterly sampling events indicated hydrocarbon contamination levels in the groundwater beneath the site. Monitoring wells were gauged and sampled on January 21, 2005.

FIELD DATA

Wells gauged:	MW-1, 2, and 3
Groundwater:	Ranged from 85.96 to 88.25 feet above mean sea level (Table 1)
Floating product:	Sheen detected in wells MW-1 and MW-3 (based on interface probe)
Groundwater gradient:	0.05 feet per foot (ft/ft)
Flow direction:	WSW

On January 21, 2005, the depth to groundwater in the site's three monitoring wells ranged from 2.95 feet below top of casing (btoc) in well MW-2 to 4.41 feet btoc in MW-3. When corrected to mean sea-level, water level elevations ranged from 85.96 feet above mean sea-level (amsl) in MW-3 to 88.25 feet amsl in MW-2. Groundwater levels for the January 21, 2005 monitoring

event, along with historical level and elevations are included in Table 1. Groundwater flow was towards the west-southwest at a gradient of 0.05 feet per foot. The groundwater flow and gradient are graphically depicted in Figure 3. Prior to sampling, all wells were purged; the groundwater field parameters for each well are presented below.

MONITORING WELL MW-1 GROUNDWATER FIELD PARAMETERS

Time	Total Vol. Removed/ gal	pH	Temp./ F	Cond./ ms(cm)⁻¹
3:27	0	6.48	56.87	0.519
3:32	1.6	6.60	58.56	0.532
3:37	3.2	6.64	58.22	0.534
3:45	4.8	6.61	58.72	0.530

MONITORING WELL MW-2 GROUNDWATER FIELD PARAMETERS

Time	Total Vol. Removed/ gal	pH	Temp./ F	Cond./ ms(cm)⁻¹
2:58	0	6.50	56.78	0.163
3:02	1.81	6.53	57.79	0.162
3:07	3.62	6.56	57.14	0.168
3:11	5.43	6.58	57.59	0.163

MONITORING WELL MW-3 GROUNDWATER FIELD PARAMETERS

Time	Total Vol. Removed/ gal	pH	Temp./ F	Cond./ ms(cm)⁻¹
2:29	0	6.38	57.46	0.357
2:35	1.78	6.45	60.39	0.364
2:40	3.56	6.48	61.11	0.371
2:44	5.34	6.47	61.05	0.366

ANALYTICAL RESULTS

Sampling locations: MW-1, 2, and 3

Analyses performed: TPHg, BTXE, MTBE, DIPE, TAME, ETBE, TBA, TPHd, TPHmo

Laboratories Used: Basic Labs, Redding, California

The analytical results for the current monitoring event are presented below and graphically depicted in Figure 4. The laboratory report is included as Appendix A. The historical analytical results for all monitoring wells, since the implementation of groundwater monitoring are included as Table 2.

	MW-1 ppb	MW-2 ppb	MW-3 ppb
TPHg:	79.1	159	10,800
Benzene:	ND < 0.5	9.0	ND < 0.5
Toluene:	ND < 0.5	0.7	ND < 0.5
Xylenes:	ND < 1.0	ND < 1.0	ND < 1.0
Ethylbenzene:	ND < 0.5	2.1	ND < 0.5
MTBE:	91.3	142	14,200
DIPE:	ND < 0.5	ND < 0.5	ND < 0.5
TAME:	ND < 5.0	ND < 5.0	108
ETBE:	ND < 5.0	ND < 5.0	6.6
TBA:	ND < 50	ND < 50	152
TPHd:	ND < 50	ND < 50	ND < 50
TPHmo:	ND < 50	ND < 50	ND < 50

NT = not tested ND = non-detectable

COMMENTS AND RECOMMENDATIONS

On January 21, 2005 the 11th groundwater monitoring event for the three on-site monitoring wells was conducted at the BO&T Old Office at 211 Railroad Avenue in Blue Lake, California. A summary of the results are presented below:

- The depth to groundwater in the three on-site wells ranged between 2.95 feet bgs to 4.41 feet bgs. Groundwater flow was towards the WSW at a gradient of 0.05 feet per foot.
- Groundwater samples from the three on-site monitoring wells were collected and analyzed for TPHg, BTXE, five fuel oxygenates, TPHd, and TPHmo. Laboratory results reported TPHg in three wells at concentrations ranging between of 79.1 ppb (MW-1) and 10,800 ppb (MW-3). The BTXE components were reported in well MW-2 only, with benzene at a concentration of 9.0 ppb, toluene at a concentration of 0.7 ppb, and ethylbenzene at a concentration of 2.1 ppb. MTBE was reported in all wells at concentrations that ranged between 91.3 ppb (MW-1) and 14,200 ppb (MW-3). Of the other fuel oxygenates, TAME, ETBE, and TBA were reported in well MW-3 at a concentration of 108 ppb, 6.6 ppb, and 152 ppb, respectively. No other fuel oxygenates were reported.

Based upon these results the following observations and conclusions have been made:

- Laboratory results have detected TPHg in wells MW-2 and MW-3 in all but two sampling events since the inception of the monitoring program. Concentrations appear to be decreasing overall in MW-2 and fluctuating in MW-3. See Figures 6 and 7.
- Benzene has consistently been reported in well MW-2, since the inception of the monitoring program. Toluene, xylenes, and ethylbenzene were consistently reported during the three initial sampling events, but have been inconsistent since January 2003.

Concentrations have generally been decreasing over time. BTXE compounds have never been detected in well MW-1, and were only detected once in well MW-3, when toluene at 100 ppb was reported in April 2004.

- MTBE has been reported in every well during every sampling event thus far, with the highest concentration in well MW-3. Concentrations have fluctuated in wells MW-1 and MW-2, whereas in well MW-3, concentrations have generally decreased. See Figures 5 through 7.
- DIPE has not been reported in any wells since the inception of the monitoring.
- TAME has been reported in well MW-3, during 10 of the 12 sampling events, including this quarter. Concentrations have been relatively consistent, ranging from 71 ppb to 130 ppb. TAME has appeared inconsistently in wells MW-1 and MW-2 at concentrations less than 1 ppb in well MW-1 and between 1.6 ppb and 102 ppb in well MW-2.
- ETBE has been reported twice since the inception of the monitoring in well MW-3, including the last sampling event. ETBE has never been reported in wells MW-1 or MW-2.
- TBA was reported once in well MW-1 and twice in well MW-3, including the most recent sampling event, since the inception of the monitoring. TBA has never been reported in well MW-2.
- TPHd has been reported during different sampling events in all wells at varying concentrations. Overall, TPHd concentrations have been declining at this site.
- TPHmo was detected during the well installation sampling event in well MW-2. It has not been reported since in any of the wells.

Based on the results of the January 2005 monitoring event and historical results, the following future activities are proposed:

- Groundwater monitoring will be continued until further notice. Groundwater level measurements will be collected from the three on-site monitoring wells to determine groundwater flow direction and gradient. Collected groundwater samples will be analyzed for TPHg, BTXE, five fuel oxygenates, TPHd, and TPHmo.
- SounPacific is currently preparing the *Report of Findings* for the January 2005 subsurface investigation, and will include recommendations for future work within the text of the report. Recommendations for future work will include the installation of additional wells as a part of additional site characterization as well as the suggested preparation and submittal of a corrective action plan.

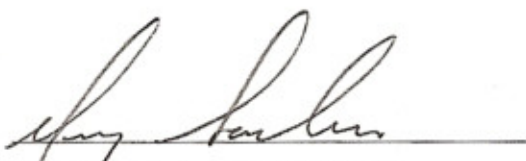
CERTIFICATION

This report was prepared under the direct supervision of a California registered geologist at SounPacific. All information provided in this report including statements, conclusions and recommendations are based solely upon field observations and analyses performed by a state-certified laboratory. SounPacific is not responsible for laboratory errors.

SounPacific promises to perform all its work in a manner that is currently used by members in similar professions working in the same geographic area. SounPacific will do whatever is reasonable to ensure that data collection is accurate. Please note however, that rain, buried utilities, and other factors can influence groundwater depths, directions and other factors beyond what SounPacific could reasonably determine.

SounPacific

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ATTACHMENTS

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Table 1
Water Levels
BO and T Old Office
211 Railroad Avenue
Blue Lake, California 95525

Sample Location	Date	Depth to Bottom/ Feet BGS	Survey Height/ Feet Above MSL	Depth to Water/ Feet BGS	Adjusted Elevation / Feet Above MSL	Thickness of Floating Product/ Feet
MW-1	5/19/2002	14.19	90.50	5.52	84.98	0.00
	6/16/2002	14.21	90.50	6.35	84.15	0.00
	7/16/2002	14.20	90.50	7.11	83.39	0.00
	8/17/2002	14.18	90.50	8.61	81.89	0.00
	9/11/2002	14.20	90.50	7.53	82.97	0.00
	#####	14.20	90.50	7.87	82.63	0.00
	#####	14.20	90.50	6.06	84.44	0.00
	#####	14.41	90.50	2.52	87.98	0.00
	1/13/2003	14.22	90.50	2.11	88.39	0.00
	2/14/2003	14.18	90.50	3.43	87.07	0.00
	3/12/2003	14.18	90.50	4.08	86.42	0.00
	4/11/2003	14.18	90.50	2.23	88.27	0.00
	7/14/2003	14.39	90.50	6.52	83.98	0.00
	#####	14.39	90.50	7.70	82.80	0.00
	1/17/2004	14.39	90.50	2.53	87.97	0.00
	4/22/2004	14.39	90.50	3.43	87.07	0.00
	7/23/2004	14.39	90.50	7.35	83.15	0.00
	#####	14.11	90.50	4.36	86.14	0.00
	1/21/2005	14.37	90.50	3.25	87.25	0.00
MW-2	5/19/2002	14.25	91.20	5.25	85.95	0.00
	6/16/2002	14.23	91.20	6.19	85.01	0.00
	7/16/2002	14.21	91.20	7.12	84.08	0.00
	8/17/2002	14.16	91.20	7.80	83.40	0.00
	9/11/2002	14.14	91.20	7.71	83.49	0.00
	#####	14.13	91.20	8.28	82.92	0.00
	#####	14.19	91.20	6.30	84.90	0.00
	#####	14.43	91.20	3.73	87.47	0.00
	1/13/2003	14.14	91.20	2.25	88.95	0.00
	2/14/2003	14.21	91.20	3.25	87.95	0.00
	3/12/2003	14.15	91.20	3.67	87.53	0.00
	4/11/2003	14.15	91.20	2.20	89.00	0.00
	7/14/2003	14.30	91.20	6.61	84.59	0.00
	#####	14.30	91.20	8.18	83.02	0.00
	1/17/2004	14.30	91.20	2.37	88.83	0.00
	4/22/2004	14.30	91.20	2.90	88.30	0.00
	7/23/2004	14.30	91.20	7.48	83.72	0.00
	#####	14.05	91.20	4.19	87.01	0.00
	1/21/2005	14.28	91.20	2.95	88.25	0.00

Sample Location	Date	Depth to Bottom/ Feet BGS	Survey Height/ Feet Above MSL	Depth to Water/ Feet BGS	Adjusted Elevation / Feet Above MSL	Thickness of Floating Product/ Feet
MW-3	5/19/2002	14.15	90.37	19.00	71.37	0.00
	6/16/2002	14.20	90.37	5.96	84.41	0.00
	7/16/2002	14.20	90.37	6.88	83.49	0.00
	8/17/2002	14.20	90.37	8.56	81.81	0.00
	9/11/2002	14.19	90.37	7.25	83.12	0.00
	10/15/2002	14.20	90.37	7.34	83.03	0.00
	11/15/2002	14.21	90.37	7.37	83.00	0.00
	12/16/2002	14.46	90.37	5.88	84.49	0.00
	1/13/2003	14.20	90.37	4.70	85.67	0.00
	2/14/2003	14.20	90.37	6.49	83.88	0.00
	3/12/2003	14.20	90.37	5.78	84.59	0.00
	4/11/2003	14.20	90.37	4.55	85.82	0.00
	7/14/2003	14.40	90.37	7.22	83.15	0.00
	10/26/2003	14.40	90.37	7.26	83.11	0.00
	1/17/2004	14.40	90.37	5.11	85.26	0.00
	4/22/2004	14.40	90.37	4.58	85.79	0.00
	7/23/2004	14.40	90.37	7.23	83.14	0.00
	10/31/2004	14.14	90.37	5.79	84.58	0.00
	1/21/2005	14.41	90.37	4.41	85.96	0.00

Notes:
Bgs: Below Ground Surface
MSL: Mean Sea Level

Table 2
Quarterly Groundwater Analytical Results

BOand T Old Office
211 Railroad Avenue
Blue Lake, California 95525

Sample Location	Sample Event	Annual Quarter	Sample Date	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Xylenes (ppb)	Ethylbenzene (ppb)	MTBE (ppb)	DIPE (ppb)	TAME (ppb)	ETBE (ppb)	TBA (ppb)	Methanol (ppb)	Ethanol (ppb)	TPHd (ppb)	TPHmo (ppb)
MW-1	Well Installation	Second Quarter	5/19/2002	364	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	344	ND < 0.5	ND < 0.5	ND < 0.5	ND < 40	ND < 5,000	ND < 5,000	170	ND < 50
	First Quarterly	Third Quarter	7/16/2002	144	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	234	ND < 0.5	ND < 0.5	ND < 0.5	ND < 100	ND < 5,000	ND < 5,000	235	ND < 50
	Second Quarterly	Fourth Quarter	10/15/2002	99.3	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	225	ND < 0.5	ND < 0.5	ND < 0.5	ND < 100	NT	NT	ND < 50	ND < 50
	Third Quarterly	First Quarter	1/13/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	130	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 5.0	ND < 12.5	ND < 50	ND < 500
	Fourth Quarterly	Second Quarter	4/11/2003	ND < 50	ND < 5.0	ND < 5.0	ND < 10	ND < 5.0	150	ND < 5.0	ND < 5.0	ND < 5.0	ND < 50	ND < 5.0	ND < 130	ND < 50	ND < 500
	Fifth Quarterly	Third Quarter	7/14/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	370	ND < 0.5	0.5	ND < 0.5	54	ND < 5.0	ND < 13	ND < 50	ND < 500
	Sixth Quarterly	Fourth Quarter	10/26/2003	ND < 50	ND < 5.0	ND < 5.0	ND < 10.0	ND < 5.0	190	ND < 5.0	ND < 5.0	ND < 5.0	ND < 50	ND < 5.0	ND < 200	ND < 50	ND < 500
	Seventh Quarterly	First Quarter	1/17/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	89	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 5.0	ND < 20	ND < 50	ND < 500
	Eighth Quarterly	Second Quarter	4/22/2004	160	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	260	ND < 0.5	0.8	ND < 0.5	ND < 5.0	NT	NT	ND < 50	ND < 500
	Ninth Quarterly	Third Quarter	7/23/2004	ND < 500	ND < 5.0	ND < 5.0	ND < 15	ND < 5.0	370	ND < 5.0	ND < 5.0	ND < 5.0	ND < 50	NT	NT	ND < 50	ND < 500
	Tenth Quarterly	Fourth Quarter	10/31/2004	66	ND < 0.5	ND < 0.5	ND < 1.5	ND < 0.5	100	ND < 0.5	0.5	ND < 0.5	ND < 50	NT	NT	ND < 50	ND < 500
MW-2	Eleventh Quarterly	First Quarter	1/21/2005	79.1	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	91.3	ND < 0.5	ND < 5.0	ND < 5.0	ND < 50	NT	NT	ND < 50	ND < 50
	Well Installation	Second Quarter	5/19/2002	7,830	1,000		128	127	1,600	ND < 50	ND < 50	ND < 50	ND < 4,000	ND < 500,000	ND < 5,000	788	614
	First Quarterly	Third Quarter	7/16/2002	4,980	383	11.1	33.7	57.4	10,700	ND < 10	102	ND < 10	ND < 2000	ND < 5,000	ND < 5,000	322	ND < 50
	Second Quarterly	Fourth Quarter	10/15/2002	3,370	127	3.2	1.7	5.5	15,000	ND < 0.5	86.2	ND < 0.5	ND < 100	NT	NT	ND < 50	ND < 50
	Third Quarterly	First Quarter	1/13/2003	120	12	ND < 0.5	ND < 1.0	1.0	170	ND < 0.5	1.6	ND < 0.5	ND < 5.0	ND < 5.0	ND < 12.5	ND < 50	ND < 500
	Fourth Quarterly	Second Quarter	4/11/2003	240	38	ND < 5.0	ND < 10	5.1	180	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 130	57	ND < 500
	Fifth Quarterly	Third Quarter	7/14/2003	220	5	ND < 5.0	ND < 10	ND < 5.0	1,100	ND < 5.0	9	ND < 5.0	ND < 50	ND < 5.0	ND < 130	ND < 50	ND < 500
	Sixth Quarterly	Fourth Quarter	10/26/2003	730	60	ND < 50	ND < 100	ND < 50	6,500	ND < 50	65	ND < 50	ND < 500	ND < 5.0	ND < 2,000	ND < 50	ND < 500
	Seventh Quarterly	First Quarter	1/17/2004	ND < 500	15	ND < 5.0	ND < 10	ND < 5.0	150	ND < 5.0	ND < 5.0	ND < 5.0	ND < 50	ND < 5.0	ND < 200	70	ND < 500
	Eighth Quarterly	Second Quarter	4/22/2004	ND < 500	24	16	ND < 10	ND < 5.0	190	ND < 5.0	ND < 5.0	ND < 5.0	ND < 50	NT	NT	ND < 50	ND < 500
	Ninth Quarterly	Third Quarter	7/23/2004	1,600	9.3	ND < 5.0	ND < 15	ND < 5.0	4,000	ND < 5.0	29	ND < 5.0	ND < 50	NT	NT	75	ND < 500
	Tenth Quarterly	Fourth Quarter	10/31/2004	550	11	ND < 5.0	ND < 15	ND < 5.0	660	ND < 5.0	5.6	ND < 5.0	ND < 50	NT	NT	67	ND < 500
MW-3	Eleventh Quarterly	First Quarter	1/21/2005	159	9.0	0.7	ND < 1.0	2.1	142	ND < 0.5	ND < 5.0	ND < 5.0	ND < 50	NT	NT	ND < 50	ND < 50
	Well Installation	Second Quarter	5/19/2002	13,300	ND < 30	ND < 30	ND < 60	ND < 30	49,312	ND < 50	ND < 50	ND < 50	ND < 4,000	ND < 500,000	ND < 5,000	146	ND < 50
	First Quarterly	Third Quarter	7/16/2002	12,400	ND < 6.0	ND < 6.0	ND < 12.0	ND < 6.0	36,700	ND < 10	109	ND < 10	ND < 2000	ND < 5,000	ND < 5,000	200	ND < 50
	Second Quarterly	Fourth Quarter	10/15/2002	5,690	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	25,800	ND < 0.5	104	ND < 0.5	ND < 100	NT	NT	ND < 50	ND < 50
	Third Quarterly	First Quarter	1/13/2003	1,800	ND < 0.5	ND < 0.5	ND < 0.9	ND < 0.5	11,000	ND < 0.5	71	6.2	1,000	ND < 5.0	ND < 12.5	ND < 50	ND < 500
	Fourth Quarterly	Second Quarter	4/11/2003	1,300	ND < 50	ND < 50	ND < 100	ND < 50	11,000	ND < 50	ND < 50	ND < 50	ND < 500	ND < 5.0	ND < 1,300	ND < 50	ND < 500
	Fifth Quarterly	Third Quarter	7/14/2003	2,000	ND < 50	ND < 50	ND < 100	ND < 50	19,000	ND < 50	71	ND < 50	ND < 500	ND < 5.0	ND < 1,300	ND < 50	ND < 500
	Sixth Quarterly	Fourth Quarter	10/26/2003	ND < 50	ND < 50	ND < 50	ND < 100	ND < 50	20,000	ND < 50	120	ND < 50	ND < 500	ND < 5.0	ND < 2,000	56	ND < 500
	Seventh Quarterly	First Quarter	1/17/2004	ND < 5,000	ND < 50	ND < 50	ND < 100	ND < 50	11,000	ND < 50	110	ND < 50	ND < 500	ND < 5.0	ND < 2,000	ND < 50	ND < 500
	Eighth Quarterly	Second Quarter	4/22/2004	10,000	ND < 50	100	ND < 100	ND < 50	14,000	ND < 50	130	ND < 50	ND < 500	NT	NT	ND < 50	ND < 500
	Ninth Quarterly	Third Quarter	7/23/2004	7,300	ND < 50	ND < 50	ND < 150	ND < 50	13,000	ND < 50	92	ND < 50	ND < 500	NT	NT	120	ND < 500
	Tenth Quarterly	Fourth Quarter	10/31/2004	7,000	ND < 20	ND < 50	ND < 150	ND < 50	11,000	ND < 50	84	ND < 50	ND < 500	NT	NT	ND < 50	ND < 500
DW-1	Eleventh Quarterly	First Quarter	1/21/2005	10,800	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	14,200	ND < 0.5	108	6.6	152	NT	NT	ND < 50	ND < 50
DW-1	Fifth Quarterly	Third Quarter	7/14/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 5.0	ND < 13	ND < 50	ND < 500

notes:

TPHg: Total Petroleum Hydrocarbons as gasoline

MTBE: Methyl tertiary butyl ether

DIPE: Diisopropyl Ether

TPHd: Total Petroleum Hydrocarbons as diesel

TAME: Tertiary amyl methyl ether

TBA: Tertiary butanol

ETBE: Ethyl tertiary butyl ether

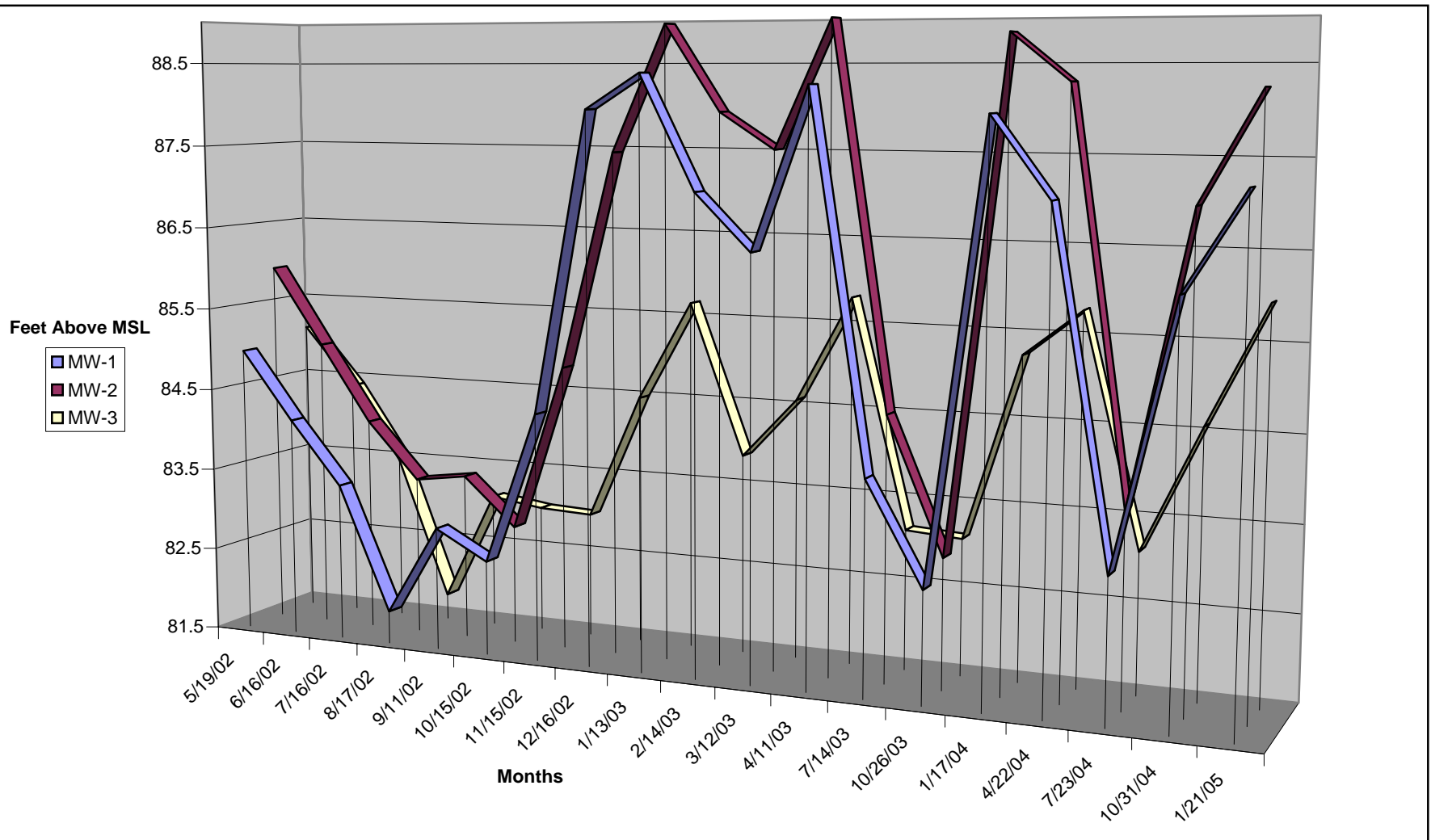
ppb: parts per billion = µg/l = .001 mg/l = 0.001 ppm

TPHmo: Total petroleum hydrocarbons as motor oil

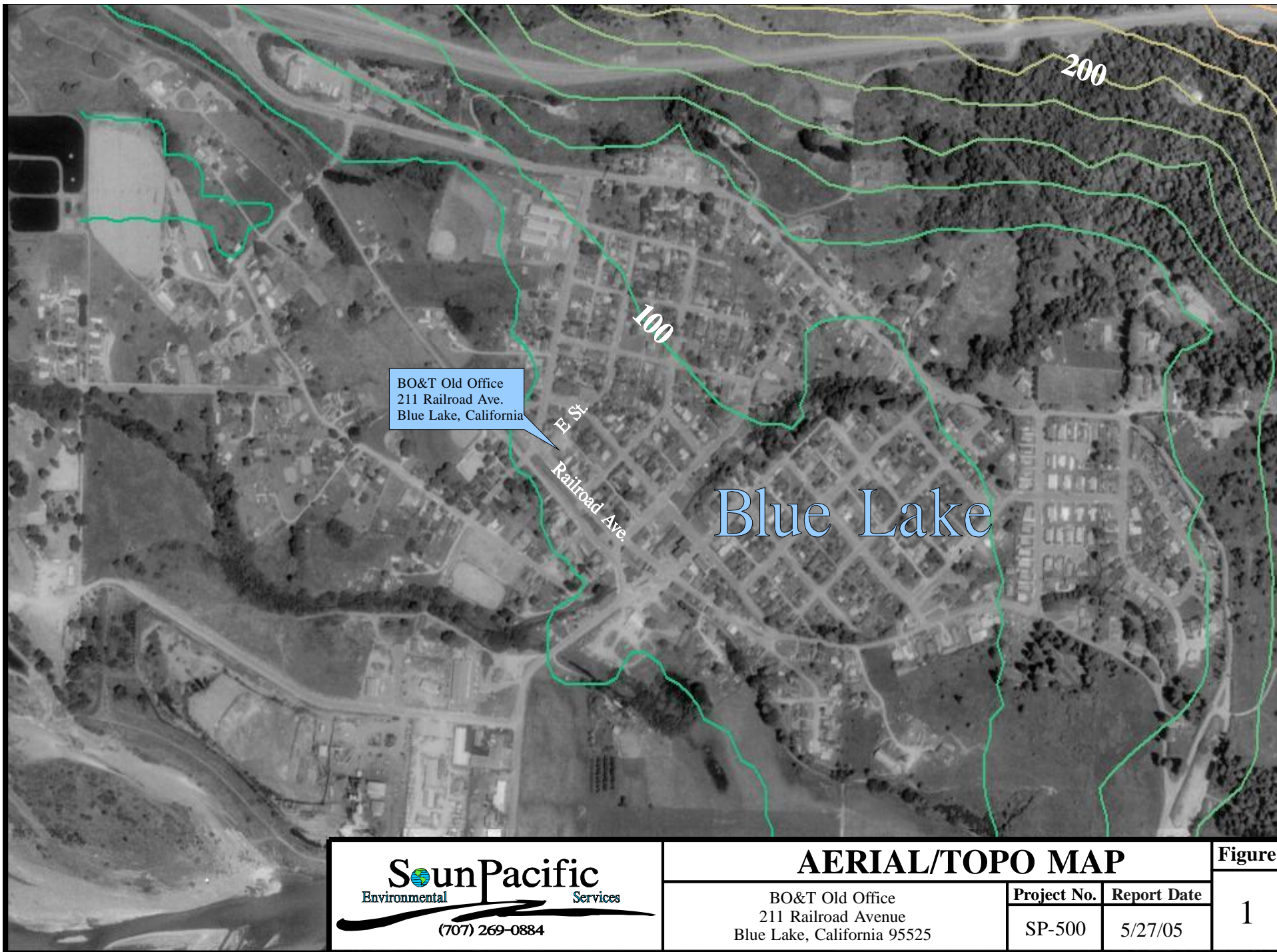
ND: Not detected. Sample was detected at or below the method detection limit as shown.

NT: Not tested

Chart 1
Hydrograph
BO and T Old Office
211 Railroad Avenue
Blue Lake, California 95525



Figures



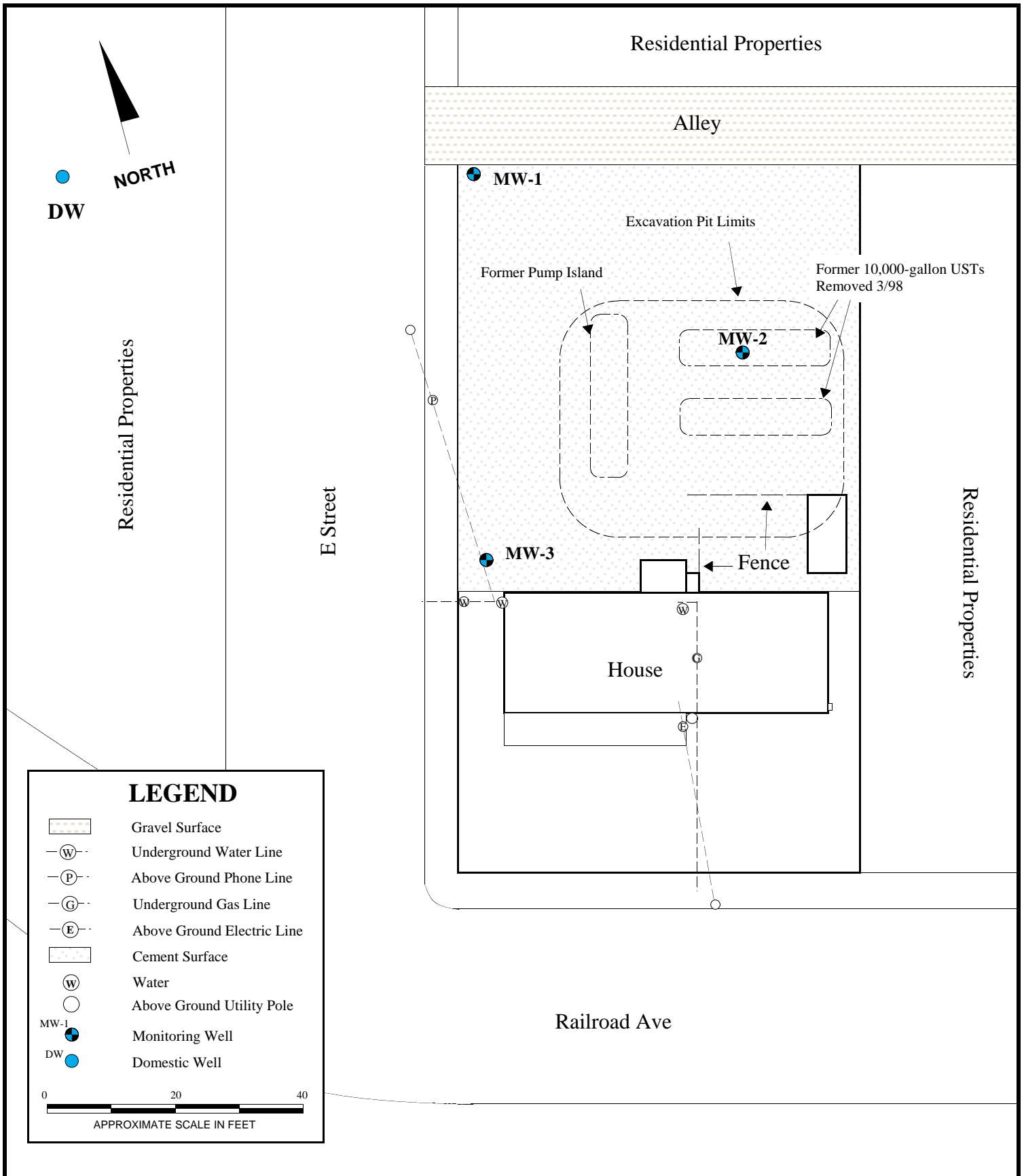
BO&T Old Office
211 Railroad Ave.
Blue Lake, California

El St.
Railroad Ave.

Blue Lake

SounPacific
Environmental Services
(707) 269-0884

AERIAL/TOPO MAP			Figure
BO&T Old Office 211 Railroad Avenue Blue Lake, California 95525	Project No.	Report Date	1
	SP-500	5/27/05	

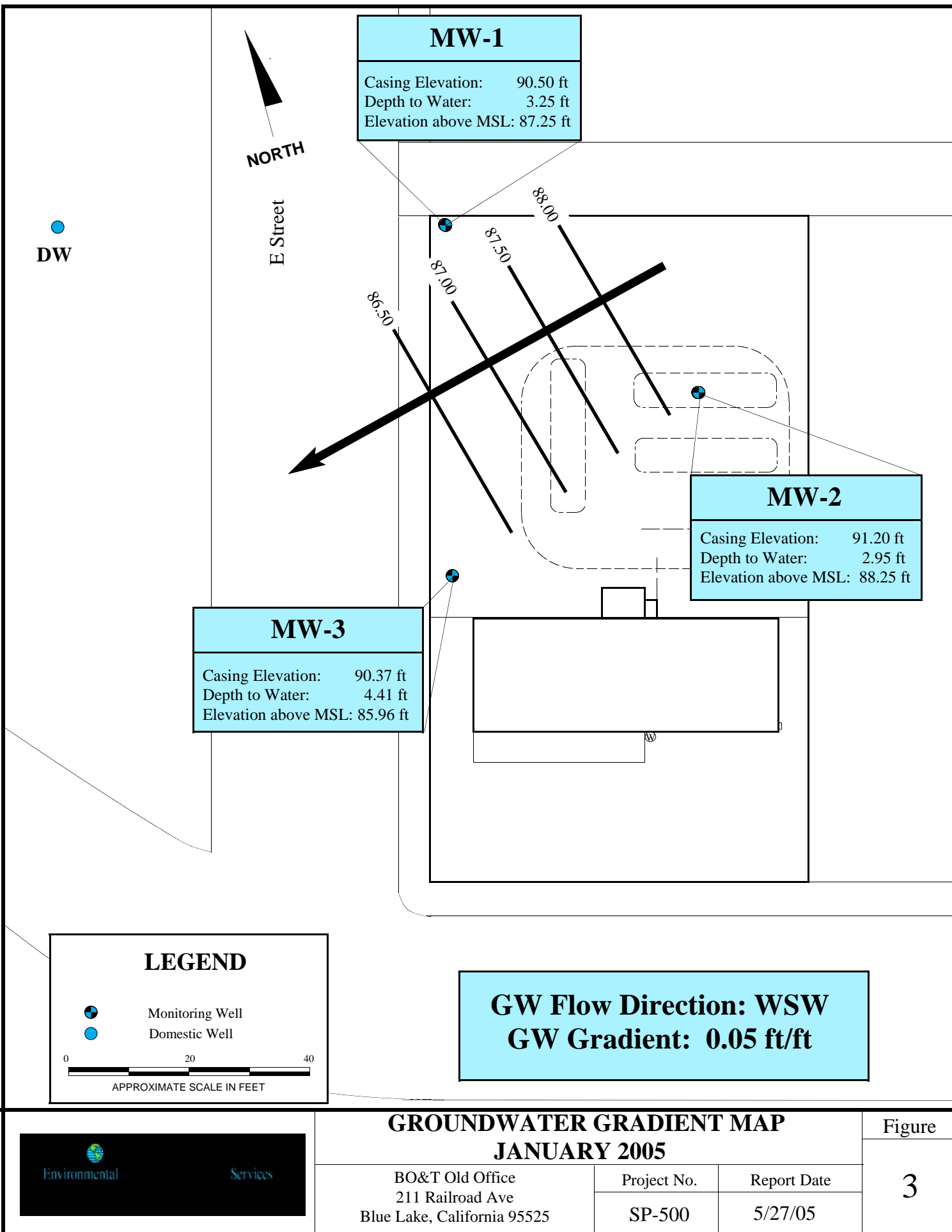


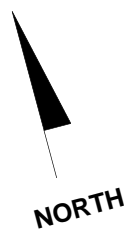
LEGEND

- Gravel Surface
- Underground Water Line (W in a circle)
- Above Ground Phone Line (P in a circle)
- Underground Gas Line (G in a circle)
- Above Ground Electric Line (E in a circle)
- Cement Surface
- Water (W in a circle)
- Above Ground Utility Pole (circle with a dot)
- Monitoring Well (blue dot with a black circle)
- Domestic Well (blue dot)

0 20 40
APPROXIMATE SCALE IN FEET

	SITE PLAN			Figure
	BO&T Old Office 211 Railroad Ave Blue Lake, California 95525	Project No.	Report Date	2
		SP-500	5/27/05	





E Street

Groundwater Results MW-1		
TPHg	79.1	ppb
MTBE	91.3	ppb

MW-1

LEGEND

Gravel Surface

Monitoring Well

Cement Surface

02040
APPROXIMATE SCALE IN FEET

Groundwater Results MW-2		
TPHg	159	ppb
BTXE	11.8	ppb
MTBE	142	ppb

MW-2

Groundwater Results MW-3		
TPHg	10,800	ppb
MTBE	14,200	ppb
TAME	108	ppb
ETBE	6.6	ppb
TBA	152	ppb

MW-3

Railroad Ave



GROUNDWATER ANALYTICAL RESULTS

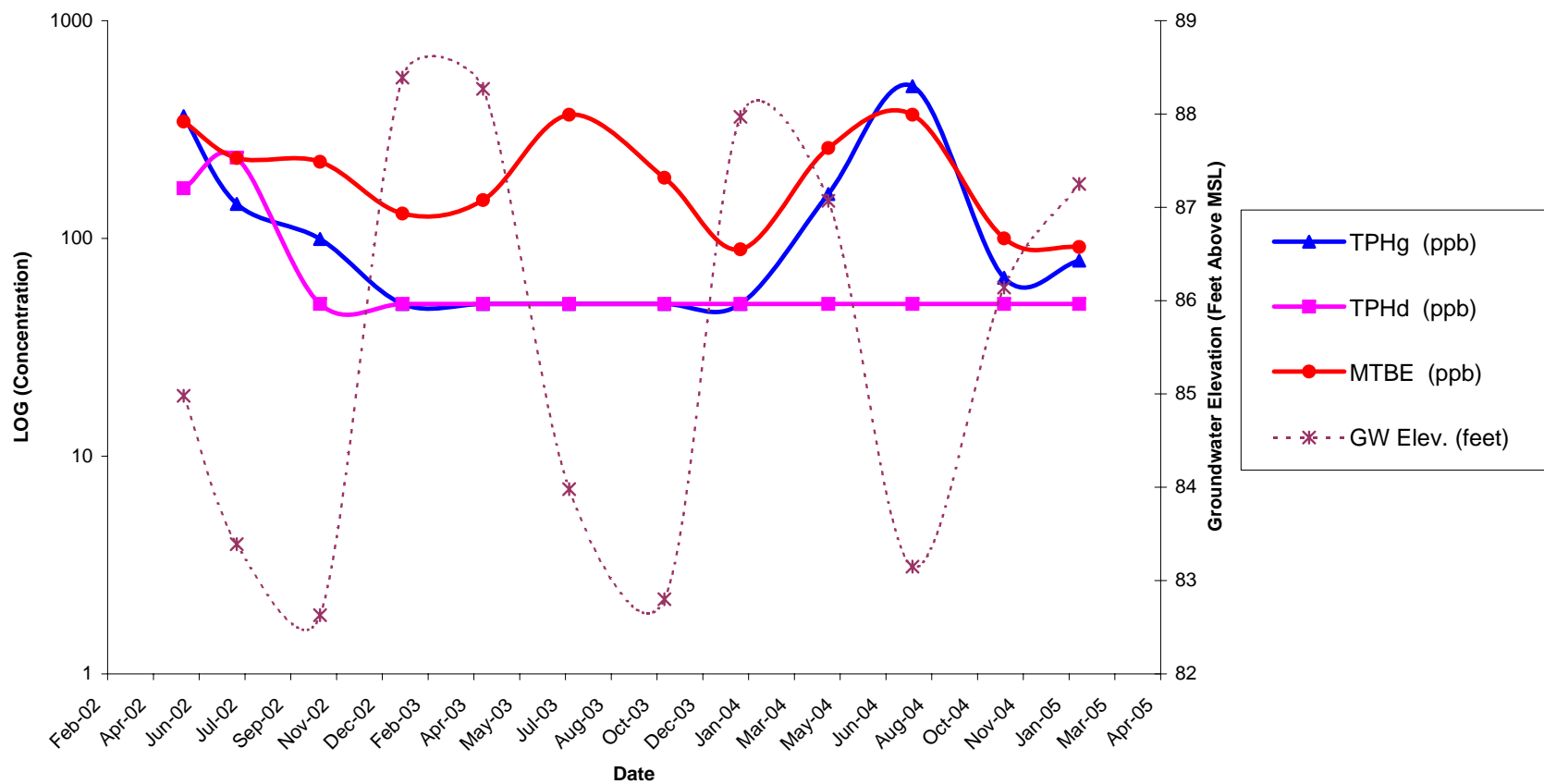
BO&T Old Office
211 Railroad Ave
Blue Lake, California 95525

Project No.
SP-500

Report Date
5/27/05

Figure

4



**MW-1 HYDROCARBON
 CONCENTRATIONS VS. TIME**

BO&T Old Office
 211 Railroad Avenue
 Blue Lake, California 95525

Project No.

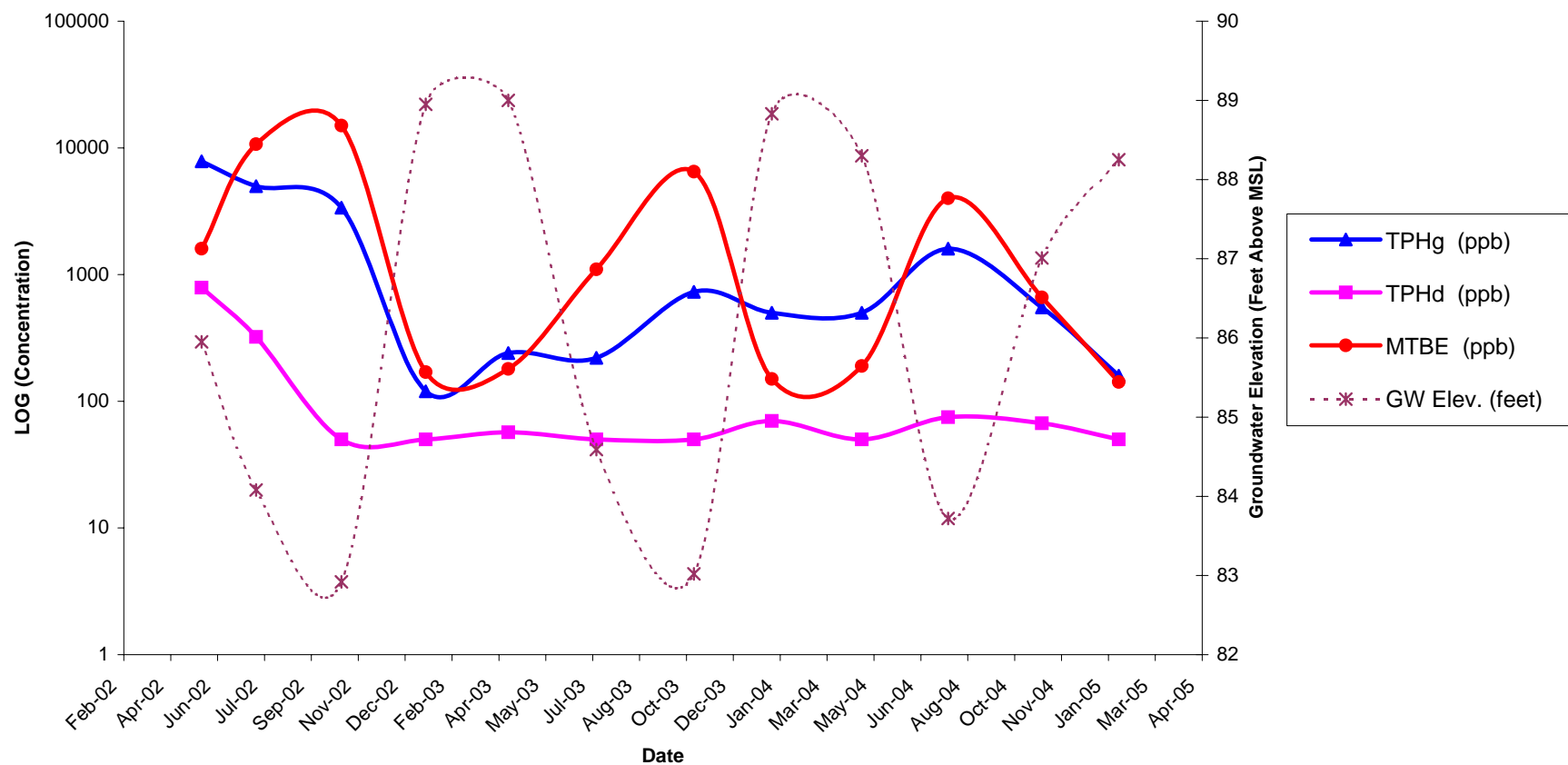
SP-500


Date

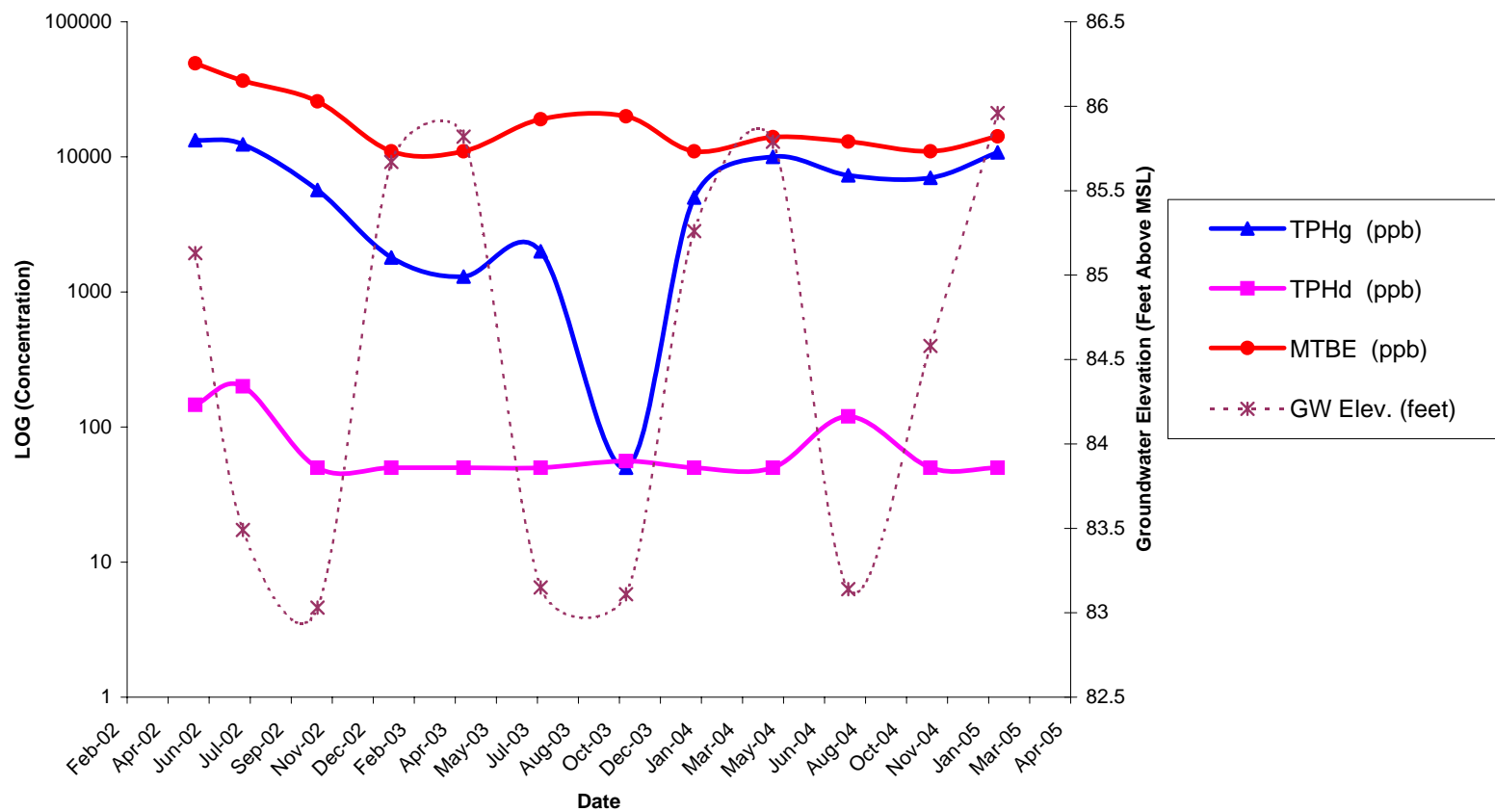
5/27/2005

Figure

5



	MW-2 HYDROCARBON CONCENTRATIONS VS. TIME			Figure
	BO&T Old Office 211 Railroad Avenue Blue Lake, California 95525		Project No.	6
			Date	
			SP-500	5/27/2005



MW-3 HYDROCARBON CONCENTRATIONS VS. TIME

BO&T Old Office
211 Railroad Avenue
Blue Lake, California 95525

Project No.

SP-500

Date

5/27/2005

Figure

7

Appendices

Appendix A

February 09, 2005

Lab ID: 5010821

Greg Soundhein
SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549
RE: BO&T OLD OFFICE SP-500

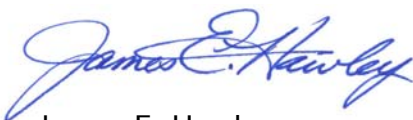
Dear Greg Soundhein,

Enclosed are the analysis results for Work Order number 5010821. All analysis were performed under strict adherence to our established Quality Assurance Plan. Any abnormalities are listed in the qualifier section of this report.

If you have any questions regarding these results, please feel free to contact us at any time. We appreciate the opportunity to service your environmental testing needs.

Sincerely,

For



James E. Hawley
Laboratory Director

California ELAP Certification Number 1677

Report To: SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549

Attention: Greg Soundhein

Project: BO&T OLD OFFICE SP-500

Description: MW-1

Matrix: Water

Lab ID: 5010821-01

Lab No: 5010821
Reported: 02/09/05
Phone: (707) 269-0884
P.O. #

Sampled: 01/21/05 00:00

Received: 01/27/05 11:57

TPH Gasoline

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
Gasoline	ug/l	79.1			50.0	EPA 8015/8260	02/01/05	02/01/05	B5B0034
Benzene	"	ND			0.5	"	"	"	"
Ethylbenzene	"	ND			0.5	"	"	"	"
Toluene	"	ND			0.5	"	"	"	"
Xylenes (total)	"	ND			1.0	"	"	"	"
Methyl tert-butyl ether	"	91.3			10.0	"	"	"	"
Di-isopropyl ether	"	ND			0.5	"	"	"	"
Tert-amyl methyl ether	"	ND			5.0	"	"	"	"
Ethyl tert-butyl ether	"	ND			5.0	"	"	"	"
Tert-butyl alcohol	"	ND			50.0	"	"	"	"
Surrogate: 4-Bromofluorobenzene		93.4 %			43-155	"	"	"	"

TPH Diesel & Motor Oil

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
Diesel	ug/l	ND			50	EPA 8015 MOD	02/03/05	01/27/05	B5A0607
Motor Oil	"	ND			50	"	"	"	"
Surrogate: Octacosane		85.0 %			50-150	"	"	"	"

Approved By

Basic Laboratory, Inc.

California D.O.H.S. Cert #1677

Report To: SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549

Attention: Greg Soundhein

Project: BO&T OLD OFFICE SP-500

Description: MW-2

Matrix: Water

Lab ID: 5010821-02

Lab No: 5010821
Reported: 02/09/05
Phone: (707) 269-0884
P.O. #

Sampled: 01/21/05 00:00

Received: 01/27/05 11:57

TPH Gasoline

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
Gasoline	ug/l	159			50.0	EPA 8015/8260	02/01/05	02/01/05	B5B0034
Benzene	"	9.0			0.5	"	"	"	"
Ethylbenzene	"	2.1			0.5	"	"	"	"
Toluene	"	0.7			0.5	"	"	"	"
Xylenes (total)	"	ND			1.0	"	"	"	"
Methyl tert-butyl ether	"	142			10.0	"	"	"	"
Di-isopropyl ether	"	ND			0.5	"	"	"	"
Tert-amyl methyl ether	"	ND			5.0	"	"	"	"
Ethyl tert-butyl ether	"	ND			5.0	"	"	"	"
Tert-butyl alcohol	"	ND			50.0	"	"	"	"
Surrogate: 4-Bromofluorobenzene		99.2 %			43-155	"	"	"	"

TPH Diesel & Motor Oil

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
Diesel	ug/l	ND			50	EPA 8015 MOD	02/03/05	01/27/05	B5A0607
Motor Oil	"	ND			50	"	"	"	"
Surrogate: Octacosane		82.8 %			50-150	"	"	"	"

Approved By

Basic Laboratory, Inc.

California D.O.H.S. Cert #1677

Report To: SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549

Attention: Greg Soundhein

Project: BO&T OLD OFFICE SP-500

Description: MW-3

Matrix: Water

Lab ID: 5010821-03

Lab No: 5010821
Reported: 02/09/05
Phone: (707) 269-0884
P.O. #

Sampled: 01/21/05 00:00

Received: 01/27/05 11:57

TPH Gasoline

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
Gasoline	ug/l	10800			10000	EPA 8015/8260	02/01/05	02/01/05	B5B0034
Benzene	"	ND			0.5	"	"	"	"
Ethylbenzene	"	ND			0.5	"	"	"	"
Toluene	"	ND			0.5	"	"	"	"
Xylenes (total)	"	ND			1.0	"	"	"	"
Methyl tert-butyl ether	"	14200			200	"	"	"	"
Di-isopropyl ether	"	ND			0.5	"	"	"	"
Tert-amyl methyl ether	"	108	E		5.0	"	"	"	"
Ethyl tert-butyl ether	"	6.6			5.0	"	"	"	"
Tert-butyl alcohol	"	152			50.0	"	"	"	"
Surrogate: 4-Bromofluorobenzene		97.4 %			43-155	"	"	"	"

TPH Diesel & Motor Oil

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
Diesel	ug/l	ND			50	EPA 8015 MOD	02/03/05	01/27/05	B5A0607
Motor Oil	"	ND			50	"	"	"	"
Surrogate: Octacosane		88.8 %			50-150	"	"	"	"

Approved By

Basic Laboratory, Inc.

California D.O.H.S. Cert #1677

Report To: SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549
Attention: Greg Soundhein
Project: BO&T OLD OFFICE SP-500

Lab No: 5010821
Reported: 02/09/05
Phone: (707) 269-0884
P.O. #

Notes and Definitions

E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J flag is equivalent to the DNQ Estimated Concentration flag.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
<	Less than reporting limit
≤	Less than or equal to reporting limit
>	Greater than reporting limit
≥	Greater than or equal to reporting limit
MDL	Method Detection Limit
RL/ML	Minimum Level of Quantitation
MCL/AL	Maximum Contaminant Level/Action Level
mg/kg	Results reported as wet weight
TTLC	Total Threshold Limit Concentration
STLC	Soluble Threshold Limit Concentration
TCLP	Toxicity Characteristic Leachate Procedure

Approved By

Basic Laboratory, Inc.

California D.O.H.S. Cert #1677

Appendix B



Standard Operating Procedures

Monitoring Well Purging and Groundwater Sampling

All SounPacific employees and contractors shall adopt the following procedures any time that groundwater samples are to be taken from an existing groundwater monitoring well.

Prior to the implementation of these procedures, the groundwater level **MUST** be measured and the presence of free phase hydrocarbons determined in accordance with SounPacific's Standard Operating Procedures for Groundwater Level Measurements and Free Phase Hydrocarbon Measurements.

Equipment Checklist

- ☐ **Gauging Data / Purge Calculations Sheet used for water level determination**
- ☐ Chain of Custody Form
- ☐ pH/ Conductivity / Temperature meter
- ☐ Pencil or Pen
- ☐ Indelible Marker
- ☐ Calculator
- ☐ Disposable Gloves
- ☐ Distilled Water
- ☐ Alconox/liquinox liquid or powdered non-phosphate cleaner
- ☐ Buckets or Tubs for decontamination station
- ☐ Bottom-filling bailer or pumping device for purging
- ☐ Disposable bottom-filling bailer and emptying device for sampling
- ☐ String, twine or fishing line for bailers
- ☐ Sample containers appropriate for intended analytical method (check with lab)
- ☐ Sample labels
- ☐ Site Safety Plan
- ☐ Tools necessary to access wells
- ☐ Drum space on site adequate for sampling event

Procedure

1. Review Site Safety Plan and utilize personal protection appropriate for the contaminants that may be encountered.
2. Measure groundwater levels and check for the presence of free product in accordance with the Standard Operating Procedures for Groundwater Level Measurements and Free Phase Hydrocarbon Measurements.

Purging

3. Calculate and record the volume of standing water in each well using the information provided on the Gauging Data / Purge Calculations sheet.
 $(DTB-DTW) \times \text{Conversion Factor} = \text{Casing Volume}.$
4. The purge volume shall be at least three times and no more than seven times the volume of standing water (the casing volume).
5. Purge the well by bailing or pumping water from the well into a calibrated receptacle, such as a five gallon bucket or tub with markings to indicate one gallon increments. Collect purgeate in a 55 gallon labeled drum and store on site. Drum labels should include the date, contents, site number, and SounPacific's name and telephone number.
6. Take measurements of pH, conductivity, temperature, and visual observations to verify the stabilization of these parameters. At least five measurements of these parameters should be made throughout the purging process. The parameters shall be considered stabilized if successive measurements vary by less than 0.25 pH units, 10% of conductivity in μS , and 1°C (or 1.8°F). Continue purging until at least three times the casing volume has been removed, and the measured parameters have stabilized as indicated above. Do not exceed seven casing volumes.
7. Take a final depth to groundwater measurement and calculate the casing volume of the recharged well. Ideally, the casing volume should have recharged to at least 80% of the original measured casing volume before sampling commences. If due to slow recharge rates it is not feasible to wait for the well to fully recharge, then note this on the Gauging Data / Purge Calculation Sheet and proceed to sample following the procedure below.

Sampling

8. **After completing groundwater measurement, and checking for free product if necessary, in accordance with SounPacific's Standard Operating Procedures for Groundwater Level Measurements and Free Phase Hydrocarbon Measurements, and after purging monitoring wells as described above, groundwater samples may be collected.**
9. Slowly lower a clean, previously unused disposable bailer into the well water approximately half of the bailer length, and allow the bailer to slowly fill.
10. Withdraw the full bailer from the monitoring well and utilize the included (clean and unused) bottom-emptying device to fill the necessary sample containers, and seal the container with the included PTFE (Teflon) lined cap.
11. When filling VOAs, fill the VOA completely full, with the meniscus rising above the rim of the bottle. Carefully cap the VOA and invert it and gently tap it to determine whether air bubbles are trapped inside. If the VOA contains air bubbles, refill the VOA and repeat this step.
12. All samples shall be labeled with the Sample ID, the Sample Date, and the Sample Location or Project Number. Use an indelible marker for writing on sample labels.
13. Record all pertinent sample data on the Chain of Custody.
14. Place samples in an ice chest cooled to 4°C with ice or "blue ice". Bottles should be wrapped in bubble wrap, and VOA's should be inserted in a foam VOA holder to protect against breakage. Samples are to be kept at 4°C until delivered to the laboratory. Any transference of sample custody shall be indicated on the Chain of Custody with the appropriate signatures as necessary.
15. Utilize clean, previously unused gloves, bailer and line, and bottom-emptying device for each well sampled.
16. When finished with all sampling, close and secure all monitoring wells.
17. Leave the site cleaner than when you arrived and drive safely.



Standard Operating Procedures

Groundwater Level Measurements and Free Phase Hydrocarbon Measurements

All SounPacific staff and contractors shall adopt the following procedures any time that groundwater elevations are determined for the purposes of establishing groundwater gradient and direction, and prior to any sampling event.

Wells are to be tested for free phase hydrocarbons (free product) before the first development or sampling of any new well, and in any well that has historically contained free product.

Equipment Checklist

- ☐ Combination water level / free phase hydrocarbon indicator probe (probe)
- ☐ Gauging Data / Purge Calculations Sheet
- ☐ Pencil or Pen/sharpie
- ☐ Disposable Gloves
- ☐ Distilled Water and or know water source on site that is clean
- ☐ Alconox (powder) or Liquinox (liquid) non-phosphate cleaners—do not use soap!
- ☐ Buckets or Tubs for decontamination station
- ☐ Tools necessary to access wells
- ☐ Site Safety Plan
- ☐ This Standard Operating Procedure
- ☐ Notify Job site business that you will be arriving to conduct work.

Procedure

1. Review Site Safety Plan and utilize personal protection appropriate for the contaminants that may be encountered.
2. Access and open all monitoring wells to be measured. Allow wells to equilibrate for approximately 15 minutes before taking any measurements.

3. Decontaminate probe with Alconox or Liquinox solution, and rinse with distilled water.
4. Determine the diameter of the well to be measured and indicate this on the Gauging Data / Purge Calculations Sheet.
5. Words of caution: Please be careful with water level and product meters probes are not attached with high strength material so please make sure to avoid catching the end on anything in the well and make sure not to wind reel to the point that it could pull on the probe. ***If product is suspect in a well, go to step 6, if no product is suspected go to step 7 below.***
6. **When product is present or suspected:** use the product level meter. Clip the static charge clamp to the side of the well casing. Then lower probe into the well through the product/water interface about one foot if possible. Then slowly raise the probe back up through the product/water interface layer and record the level as the tone changes from solid to broken-record this level in the Gauging Data / Purge Calculations Sheet to the nearest 0.01 foot (DTP). Continue to raise the probe up through the product until the tone stops completely-record this level on the Gauging Data / Purge Calculations Sheet to the nearest 0.01 foot (DTW). Then go to step 8.
7. **When no product is present or suspected:** If no free product is present, record the depth of the water (to the nearest 0.01 foot) relative to the painted black mark on the top of the well casing. Leave the probe in the well just a hair above the water level to ensure the well as equilibrated. As the well rises, the tone will sound. Make sure no increase in water levels have occurred in over a ten-minute period. Water levels can lower as well as rise. Make sure you note when the level you keep lowering the probe to has remained stable for at least ten minutes. Once this has been accomplished, please record this level in the Gauging Data / Purge Calculations Sheet to the nearest 0.01 foot (DTW).
8. Turn off the probe, and use the probe to determine the depth to the bottom of the well relative to the top of the well casing. This is the depth to bottom measurement (DTB).
9. Decontaminate probe and tape by washing in an Alconox/Liquinox solution (***read directions on solution for ratio of water to cleanser***) and use the toothbrush provided to remove any foreign substance from the probe and tape. Then triple rinse probe and tape with clean water and then proceed to take measurements in the next well.
10. If sampling is to occur, proceed to implement SounPacific's Standard Operating Procedure for Monitoring Well Purging and Sampling. If no sampling is to be performed, close and secure all wells and caps.

Appendix C

GAUGING DATA/PURGE CALCULATIONS

Job Site: BOBT Old OfficeJob No.: SP-500Event: "11th Quarterly"Date: 1/21/05

Soun Pacific
Environmental Services

(707) 269-0884

WELL NO.	DIA. (in.)	DTB (ft.)	DTW (ft.)	ST (ft.)	CV (gal.)	PV (gal.)	SPL (ft.)	Bailer Loads	Notes
MW-1	2	14.37	3.25	11.12	1.78	5.34			—
MW-2	2	14.28	2.95	11.33	1.81	5.43			—
MW-3	2	14.41	4.41	10.00	1.6	4.8			Slow recharge rate

Explanation:

DIA. = Well Diameter

DTB = Depth to Bottom

DTW = Depth to Water

ST = Saturated Thickness (DTB-DTW)

CV = Casing Volume (ST x cf)

PV = Purge Volume (standard 3 x CV,
well development 10 x CV)

SPL = Thickness of Separate Phase Liquid

Conversion Factors (cf):

2 in. dia. well cf = 0.16 gal./ft.

4 in. dia. well cf = 0.65 gal./ft.

6 in. dia. well cf = 1.44 gal./ft.

Sampler:

Jeff Barnes

RECEIVED
1/24/05

Well Gauging/Sampling Report

Sheet 1 of 3

Date: 1/21/05 Project Name: BOBT Old Office Project No: SP-500 Well Number: MW-1

Analyses Tested: BTEX, 5-oxy's, TPHd, TPHg, TPHmo

Sample Containers: (3) HCL VOXS, (2) 1-L amber bottles

Purge Technique: ☒ Bailer ☐ Pump

Sounder Used: ☐ Water Meter ☒ Interface Meter

Water & Free Product Levels

Time	Depth to Water	Depth to Product	Notes
2:06	3.25		Sheen detected
2:20	3.25		No sheen detected
	End		

Field Measurements

Time	Total Vol. Removed (gal)	pH	Temp (F)	Cond. (ms/cm)	DO (mg/L)	DO (%)	
3:27	0	6.48	56.87	.519	.91	8.8	
3:32	1.6	6.60	58.56	.532 .530	.30	2.9	
3:37	3.2	6.64	58.22	.534	.29	2.9	
3:45	4.8	6.61	58.72	.530	.22	2.1	

Field Scientist: Jeff Caine

Well Gauging/Sampling Report

Sheet 2 of 3

Date: 1/21/05 Project Name: BOBT old office Project No: SP-500 Well Number: MW-2

Analyses Tested: BTEX, 5 oxy's, TPHd, TPHg, TPHno

Sample Containers: (3) HCL VOA's, (2) 1-L amber bottles

Purge Technique: ☒ Bailer ☐ Pump

Sounder Used: ☐ Water Meter ☒ Interface Meter

Water & Free Product Levels

Time	Depth to Water	Depth to Product	Notes
2:11	2.95		No sheen
2:22	2.95		↓
	End		

Field Measurements

Time	Total Vol. Removed(gal)	pH	Temp(F)	Cond./(ms/cm)	DO/(mg/L)	DO/(%)	
2:58	0	6.50	56.78	.163	.57	5.5	
3:02	1.81	6.53	57.79	.162	.39	3.8	
3:07	3.62	6.56	57.14	.168	.26	2.5	
3:11	5.43	6.58	57.59	.163	.27	2.7	

Field Scientist: Jed Gaines

Well Gauging/Sampling Report

Sheet 3 of 3

Date: 1/21/05 Project Name: BOBT old office Project No: SP-560 Well Number: MW-3

Analyses Tested: BTEX, 5-oxys, TPHd, TPHg, TPHms

Sample Containers: (3) HCl VOA's, (2) 1-L amber bottles

Purge Technique: ☒ Bailer ☐ Pump

Sounder Used: ☐ Water Meter ☒ Interface Meter

Water & Free Product Levels

Time	Depth to Water	Depth to Product	Notes
2:15	5.58		Sheen detected ↓ ▽
2:25	5.36		
2:30	5.20		
2:39	5.01		
2:49	4.40 4.41		
3:10	4.41		

End

Field Measurements

Time	Total Vol. Removed (gal)	pH	Temp (F)	Cond. (ms/cm)	DO (mg/L)	DO (%)	
2:29	0	6.38	57.46	.357	1.61	15.7	
2:35	1.78	6.45	60.39	.364	.57	5.8	
2:40	3.56	6.48	61.11	.371	.39	4.0	
2:44	5.34	6.47	61.05	.366	.34	3.4	

Field Scientist: Jeff Gaines